

## INTERNATIONAL SEARCH REPORT

International Application No.

PCT/GB 03/03012

## A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 C12N15/86 C12N5/10 A61K35/76 A61K48/00

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 C12N A61K

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the International search (name of data base and, where practical, search terms used)

EPO-Internal, BIOSIS, PAJ, EMBASE

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 97 12049 A (CASIMIR COLIN MAURICE ;MEDICAL RES COUNCIL (GB); RUSSELL STEPHEN J) 3 April 1997 (1997-04-03) cited in the application page 3, line 30 -page 5, line 35 page 7, line 1 -page 10, line 25; examples 1-3	1-5, 7-41
Y	page 25, line 15 -page 27, line 25 same passages	6
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☒ Further documents are listed in the continuation of box C.☒ Patent family members are listed in annex.

## \* Special categories of cited documents:

\*A\* document defining the general state of the art which is not considered to be of particular relevance

\*E\* earlier document but published on or after the International filing date

\*L\* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

\*O\* document referring to an oral disclosure, use, exhibition or other means

\*P\* document published prior to the international filing date but later than the priority date claimed

\*T\* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

\*X\* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

\*Y\* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

\*G\* document member of the same patent family

Date of the actual completion of the International search

23 October 2003

Date of mailing of the International search report

10/11/2003

Name and mailing address of the ISA

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## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	BITTNER ALEXANDRA ET AL: "Specific transduction of HIV-1 envelope expressing cells by retroviral vectors pseudotyped with hybrid CD4/CXCR4 receptors" JOURNAL OF VIROLOGICAL METHODS, vol. 104, no. 1, June 2002 (2002-06), pages 83-92, XP002259019 ISSN: 0166-0934 Whole document and in particular items 3.3 and 3.4.	1-3, 7-17,22, 23, 26-29, 37,41
Y	same passages	6
Y	JIANG AN ET AL: "Cell-type-specific gene transfer into human cells with retroviral vectors that display single-chain antibodies" JOURNAL OF VIROLOGY, vol. 72, no. 12, December 1998 (1998-12), pages 10148-10156, XP002103152 ISSN: 0022-538X the whole document	6
A	WO 94 20621 A (CZAPLEWSKI LLOYD GEORGE ;BRITISH BIO TECHNOLOGY (GB)) 15 September 1994 (1994-09-15) page 16, paragraph 2	
A	LAVILLETTE DIMITRI ET AL: "Retargeting gene delivery using surface-engineered retroviral vector particles" CURRENT OPINION IN BIOTECHNOLOGY, vol. 12, no. 5, October 2001 (2001-10), pages 461-466, XP002259021 ISSN: 0958-1669	
A	GOLLAN TIMOTHY J ET AL: "Redirecting retroviral tropism by insertion of short, nondisruptive peptide ligands into envelope" JOURNAL OF VIROLOGY, vol. 76, no. 7, April 2002 (2002-04), pages 3558-3563, XP002259022 ISSN: 0022-538X cited in the application	

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## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	<p>GOLLAN TIMOTHY J ET AL: "Selective targeting and inducible destruction of human cancer cells by retroviruses with envelope proteins bearing short peptide ligands" JOURNAL OF VIROLOGY, vol. 76, no. 7, April 2002 (2002-04), pages 3564-3569, XP002259023 ISSN: 0022-538X cited in the application</p>	

# INTERNATIONAL SEARCH REPORT

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## Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☒ Claims Nos.:  
because they relate to subject matter not required to be searched by this Authority, namely:  
Although claims 28, 37 and 38 are directed to a method of treatment of the human/animal body, the search has been carried out and based on the alleged effects of the compound/composition.
2. ☒ Claims Nos.: 42  
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:  
see FURTHER INFORMATION sheet PCT/ISA/210
3. ☐ Claims Nos.:  
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

## Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this International application, as follows:

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.  
☐ No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/SA/ 210

Continuation of Box I.2

Claims Nos.: 42

In view of the formulation of claim 42 it is impossible to determine the matter for which protection is sought. The present claim fails to comply with the clarity and conciseness requirements of Article 6 PCT (see also Rule 6.1(a) PCT) to such an extent that a meaningful search is impossible.

The applicant's attention is drawn to the fact that claims, or parts of claims, relating to inventions in respect of which no international search report has been established need not be the subject of an international preliminary examination (Rule 66.1(e) PCT). The applicant is advised that the EPO policy when acting as an International Preliminary Examining Authority is normally not to carry out a preliminary examination on matter which has not been searched. This is the case irrespective of whether or not the claims are amended following receipt of the search report or during any Chapter II procedure.

# INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/JP 03/03012

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
WO 9712049	A	03-04-1997	AU 730596 B2	08-03-2001
			AU 7137996 A	17-04-1997
			CA 2231735 A1	03-04-1997
			EP 0856061 A1	05-08-1998
			WO 9712049 A1	03-04-1997
			JP 2001503243 T	13-03-2001
			US 2003007952 A1	09-01-2003
WO 9420621	A	15-09-1994	AU 6006394 A	26-09-1994
			WO 9420621 A2	15-09-1994